

## RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.

Application Serial Number: 10/568,737A

Source: IFWO.

Date Processed by STIC: 2/1/07

# ***ENTERED***



IFWO

## RAW SEQUENCE LISTING

DATE: 02/01/2007

PATENT APPLICATION: US/10/568,737A

TIME: 08:37:20

Input Set : F:\436uspc.app.txt

Output Set: N:\CRF4\02012007\J568737A.raw

```

4 <110> APPLICANT: Rioux, Stephane
5      Martin, Denis
6      Hamel, Josee
7      Brodeur, Bernard R.
8      Rheault, Patrick
9      Droun, Nathalie
11 <120> TITLE OF INVENTION: POLYPEPTIDES OF STREPTOCOCCUS PYOGENES
13 <130> FILE REFERENCE: 484112.436USPC
15 <140> CURRENT APPLICATION NUMBER: 10/568,737A
C--> 16 <141> CURRENT FILING DATE: 2006-02-15
18 <150> PRIOR APPLICATION NUMBER: PCT/CA2004/001510
19 <151> PRIOR FILING DATE: 2004-08-16
21 <150> PRIOR APPLICATION NUMBER: US 60/495,094
22 <151> PRIOR FILING DATE: 2003-08-15
24 <160> NUMBER OF SEQ ID NOS: 46
26 <170> SOFTWARE: PatentIn version 3.3
28 <210> SEQ ID NO: 1
29 <211> LENGTH: 537
30 <212> TYPE: DNA
31 <213> ORGANISM: Streptococcus pyogenes
33 <400> SEQUENCE: 1
34 atgtcacgta ttggttaataa agtaattact atgcctgcag gcgttgaatt aacaaataac      60
35 aacaatgtta ttactgttaa aggccctaaa ggcgaactca ctctgagatt caacaaaaat      120
36 attgaaatca aagttgaagg gactgaaatc acagttgtac gtcctaacga ctcaaaagaa      180
37 atgaaaacaa tccatggtac aaccctgtgt aacttgaata acatggttgt aggtgtttct      240
38 gaaggtttca aaaaagatct tgaaatgaag ggtgtcgggt accgtgctca acttcaaggt      300
39 actaaacttg tcctttcagt aggtaaatct caccaagacg aagttgaagc tccagaagga      360
40 attactttca ctggttgctaa cccaacttca atctcagttg aaggaatcaa caaagaagtt      420
41 gttgggtcaaa cagctgctta catccgtagc ttgcgttcac cagagcctta caaaggcaaa      480
42 gggatccggt acgttggtga atacgtacgc cttaaagaag gtaaaacagg taaataa      537
45 <210> SEQ ID NO: 2
46 <211> LENGTH: 178
47 <212> TYPE: PRT
48 <213> ORGANISM: Streptococcus pyogenes
50 <400> SEQUENCE: 2
51 Met Ser Arg Ile Gly Asn Lys Val Ile Thr Met Pro Ala Gly Val Glu
52 1          5          10          15
53 Leu Thr Asn Asn Asn Asn Val Ile Thr Val Lys Gly Pro Lys Gly Glu
54          20          25          30
55 Leu Thr Arg Glu Phe Asn Lys Asn Ile Glu Ile Lys Val Glu Gly Thr
56          35          40          45
57 Glu Ile Thr Val Val Arg Pro Asn Asp Ser Lys Glu Met Lys Thr Ile
58          50          55          60

```

## RAW SEQUENCE LISTING

DATE: 02/01/2007

PATENT APPLICATION: US/10/568,737A

TIME: 08:37:20

Input Set : F:\436uspc.app.txt

Output Set: N:\CRF4\02012007\J568737A.raw

```

59 His Gly Thr Thr Arg Ala Asn Leu Asn Asn Met Val Val Gly Val Ser
60 65          70          75          80
61 Glu Gly Phe Lys Lys Asp Leu Glu Met Lys Gly Val Gly Tyr Arg Ala
62          85          90          95
63 Gln Leu Gln Gly Thr Lys Leu Val Leu Ser Val Gly Lys Ser His Gln
64          100          105          110
65 Asp Glu Val Glu Ala Pro Glu Gly Ile Thr Phe Thr Val Ala Asn Pro
66          115          120          125
67 Thr Ser Ile Ser Val Glu Gly Ile Asn Lys Glu Val Val Gly Gln Thr
68          130          135          140
69 Ala Ala Tyr Ile Arg Ser Leu Arg Ser Pro Glu Pro Tyr Lys Gly Lys
70 145          150          155          160
71 Gly Ile Arg Tyr Val Gly Glu Tyr Val Arg Leu Lys Glu Gly Lys Thr
72          165          170          175
73 Gly Lys
76 <210> SEQ ID NO: 3
77 <211> LENGTH: 1269
78 <212> TYPE: DNA
79 <213> ORGANISM: Streptococcus pyogenes
81 <400> SEQUENCE: 3
82 atgtttcagt taagaaaaaa aatgacgcgc aaacaattag ccttggtgag tgctggagtg      60
83 ttgacctgtg tggttggttg tagctacttg ataatgaacc atcaacaaca agaaattgtc      120
84 tctagtgtca acaaagtaaa agccttaacc ataaaagaag ccatggaaca aggaaaagat      180
85 atcagcttga ccttagctgg cgaagtaaca gctaacaaca gcagcaaagt caaatcgac      240
86 tcaagtaaag gagaagtcaa agaggtcttt gttaaaaaag gcgatgttgt caaagtagga      300
87 caacccttgt ttagctatga aacgtcacag cggttaacgg ctcaaagttc agaatttgat      360
88 gttcaaacca aagccaatca gtcceaagtt gctaaaacca atgcagcatt gaagtgggaa      420
89 acctacaatc gcaaggtcaa tgaaatcaac accctaaaat ctgctacaa cactgcacca      480
90 gatgagagct tactagagca aattcgcagc gcagaagaca gtgtatccca agcactaagc      540
91 gatgccaaaa cagcagatag cgatgtcaaa accgctcaaa tcgaactcga taaagctaata      600
92 gctactgcca caacggaaaa aggtaaacta gagtatgaca ccgttaagtc agacaccgca      660
93 ggaaccattg ttagtctaaa tactgatttg ccaaatcaat caaatccaa aaaagaaaat      720
94 gaaactttta tggaattat cgacaaatca aaaatgtag tcaaaggtaa cattagttaa      780
95 ttgaccgtg acaagttaaa aatcgggtcaa aaagtcgaag tgattgaccg caaagacaac      840
96 tctaaaaaat ggactggaaa agtaacccaa gttggcaacc tcaaagcaga ggaaaaaggc      900
97 caaggtcaag gccaagggtg caatgaccaa caagataatc caaaccaagc aaaattccct      960
98 tatgttattg aacttgacca atcagacaag cagccactca ttggctcaca cacctatgtt      1020
99 aatgtgtctc acaatgttcc agaagctggc aagatcgtat tgaaagaaac ctttacaatg      1080
100 gcagaaaatg gaaaaaccta tgtgtggaaa gttgataaaa acaaggtcaa aaaacaagaa      1140
101 atcaagacta agcccttctc aaaagggttat gttgaggtta caagtggctt gactatgcaa      1200
102 gataagattg ctacgccgt tcttggcatg aaagacggta tggaggtagg aagtattggt      1260
103 aaaccttaa
106 <210> SEQ ID NO: 4
107 <211> LENGTH: 422
108 <212> TYPE: PRT
109 <213> ORGANISM: Streptococcus pyogenes
111 <400> SEQUENCE: 4
112 Met Phe Gln Leu Arg Lys Lys Met Thr Arg Lys Gln Leu Ala Leu Leu
113 1          5          10          15

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/568,737A

DATE: 02/01/2007

TIME: 08:37:20

Input Set : F:\436uspc.app.txt

Output Set : N:\CRF4\02012007\J568737A.raw

```

114 Ser Ala Gly Val Leu Thr Cys Val Val Gly Gly Ser Tyr Leu Ile Met
115          20          25          30
116 Asn His Gln Gln Gln Glu Ile Val Ser Ser Val Asn Lys Val Lys Ala
117          35          40          45
118 Leu Thr Ile Lys Glu Ala Met Glu Gln Gly Lys Asp Ile Ser Leu Thr
119          50          55          60
120 Leu Ala Gly Glu Val Thr Ala Asn Asn Ser Ser Lys Val Lys Ile Asp
121 65          70          75          80
122 Ser Ser Lys Gly Glu Val Lys Glu Val Phe Val Lys Lys Gly Asp Val
123          85          90          95
124 Val Lys Val Gly Gln Pro Leu Phe Ser Tyr Glu Thr Ser Gln Arg Leu
125          100          105          110
126 Thr Ala Gln Ser Ser Glu Phe Asp Val Gln Thr Lys Ala Asn Gln Leu
127          115          120          125
128 Gln Val Ala Lys Thr Asn Ala Ala Leu Lys Trp Glu Thr Tyr Asn Arg
129          130          135          140
130 Lys Val Asn Glu Ile Asn Thr Leu Lys Ser Arg Tyr Asn Thr Ala Pro
131 145          150          155          160
132 Asp Glu Ser Leu Leu Glu Gln Ile Arg Ser Ala Glu Asp Ser Val Ser
133          165          170          175
134 Gln Ala Leu Ser Asp Ala Lys Thr Ala Asp Ser Asp Val Lys Thr Ala
135          180          185          190
136 Gln Ile Glu Leu Asp Lys Ala Asn Ala Thr Ala Thr Thr Glu Lys Gly
137          195          200          205
138 Lys Leu Glu Tyr Asp Thr Val Lys Ser Asp Thr Ala Gly Thr Ile Val
139          210          215          220
140 Ser Leu Asn Thr Asp Leu Pro Asn Gln Ser Lys Ser Lys Lys Glu Asn
141 225          230          235          240
142 Glu Thr Phe Met Glu Ile Ile Asp Lys Ser Lys Met Leu Val Lys Gly
143          245          250          255
144 Asn Ile Ser Glu Phe Asp Arg Asp Lys Leu Lys Ile Gly Gln Lys Val
145          260          265          270
146 Glu Val Ile Asp Arg Lys Asp Asn Ser Lys Lys Trp Thr Gly Lys Val
147          275          280          285
148 Thr Gln Val Gly Asn Leu Lys Ala Glu Glu Lys Gly Gln Gly Gln Gly
149          290          295          300
150 Gln Gly Gly Asn Asp Gln Gln Asp Asn Pro Asn Gln Ala Lys Phe Pro
151 305          310          315          320
152 Tyr Val Ile Glu Leu Asp Gln Ser Asp Lys Gln Pro Leu Ile Gly Ser
153          325          330          335
154 His Thr Tyr Val Asn Val Leu Asn Asn Val Pro Glu Ala Gly Lys Ile
155          340          345          350
156 Val Leu Lys Glu Thr Phe Thr Met Ala Glu Asn Gly Lys Thr Tyr Val
157          355          360          365
158 Trp Lys Val Asp Lys Asn Lys Val Lys Lys Gln Glu Ile Lys Thr Lys
159          370          375          380
160 Pro Phe Ser Lys Gly Tyr Val Glu Val Thr Ser Gly Leu Thr Met Gln
161 385          390          395          400
162 Asp Lys Ile Ala Gln Pro Leu Pro Gly Met Lys Asp Gly Met Glu Val

```

## RAW SEQUENCE LISTING

DATE: 02/01/2007

PATENT APPLICATION: US/10/568,737A

TIME: 08:37:20

Input Set : F:\436uspc.app.txt

Output Set: N:\CRF4\02012007\J568737A.raw

```

163          405          410          415
164 Gly Ser Ile Val Lys Pro
165          420
167 <210> SEQ ID NO: 5
168 <211> LENGTH: 885
169 <212> TYPE: DNA
170 <213> ORGANISM: Streptococcus pyogenes
172 <400> SEQUENCE: 5
173 atgataaaac gatgtaaagg aattgggtcta gccttaatgg ccttcttttt ggtagcttgt      60
174 gtgaatcagc accctaaaac ggctaaagag actgaacagc agagaattgt agccacttcg      120
175 gttgctgtgg ttgatattctg tgaccgttta aatttagacc tcgttggggg ttgtgatagt      180
176 aaattatata cccttcctaa acgctatgat gctgttaagc gtgtggggtt acccatgaat      240
177 cctgatatag agttgattgc ttctttgaaa ccaacttgga ttttgagtcc caattcttta      300
178 caagaagatt tggaacccaa gtatcaaaaa ttggatactg agtatgggtt tttgaactta      360
179 cgaagtgttg agggcatgta ccagtcatt gatgatttag ggaacctttt ccaacgtcaa      420
180 caagaagcaa agaattgctg ccagcaatac caggactatt atcgtgcttt ccaagctaaa      480
181 cgtaagggga agaaaaagcc taaagtgtt attcttatgg gcttgccagg tagttatttg      540
182 gtggcgacga accaatctta tgtaggggaat cttttggact tggcaggtgg tgagaatgtt      600
183 tatcagtcag atgagaaaga atttctatca gctaactctg aagacatgct ggctaaggag      660
184 cctgacttga ttttacgaac agctcatgcc attccagaca aggtaaaagt gatgtttgac      720
185 aaagaatttg ctgaaaatga tatttggaac cattttacgg cagtcaagga agggaaagtc      780
186 tatgatttgg acaataccct gtttggcatg agtgctaaat tgaactaccc agaagccttg      840
187 gacaccttaa cacagctttt tgaccacgtg ggagatcatc cgtaa      885
189 <210> SEQ ID NO: 6
190 <211> LENGTH: 294
191 <212> TYPE: PRT
192 <213> ORGANISM: Streptococcus pyogenes
194 <400> SEQUENCE: 6
195 Met Ile Lys Arg Cys Lys Gly Ile Gly Leu Ala Leu Met Ala Phe Phe
196 1          5          10          15
197 Leu Val Ala Cys Val Asn Gln His Pro Lys Thr Ala Lys Glu Thr Glu
198          20          25          30
199 Gln Gln Arg Ile Val Ala Thr Ser Val Ala Val Val Asp Ile Cys Asp
200          35          40          45
201 Arg Leu Asn Leu Asp Leu Val Gly Val Cys Asp Ser Lys Leu Tyr Thr
202          50          55          60
203 Leu Pro Lys Arg Tyr Asp Ala Val Lys Arg Val Gly Leu Pro Met Asn
204 65          70          75          80
205 Pro Asp Ile Glu Leu Ile Ala Ser Leu Lys Pro Thr Trp Ile Leu Ser
206          85          90          95
207 Pro Asn Ser Leu Gln Glu Asp Leu Glu Pro Lys Tyr Gln Lys Leu Asp
208          100         105         110
209 Thr Glu Tyr Gly Phe Leu Asn Leu Arg Ser Val Glu Gly Met Tyr Gln
210          115         120         125
211 Ser Ile Asp Asp Leu Gly Asn Leu Phe Gln Arg Gln Gln Glu Ala Lys
212          130         135         140
213 Glu Leu Arg Gln Gln Tyr Gln Asp Tyr Tyr Arg Ala Phe Gln Ala Lys
214 145          150         155         160
216 Arg Lys Gly Lys Lys Lys Pro Lys Val Leu Ile Leu Met Gly Leu Pro

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/568,737A

DATE: 02/01/2007

TIME: 08:37:20

Input Set : F:\436uspc.app.txt

Output Set: N:\CRF4\02012007\J568737A.raw

```

217          165          170          175
218 Gly Ser Tyr Leu Val Ala Thr Asn Gln Ser Tyr Val Gly Asn Leu Leu
219          180          185          190
220 Asp Leu Ala Gly Gly Glu Asn Val Tyr Gln Ser Asp Glu Lys Glu Phe
221          195          200          205
222 Leu Ser Ala Asn Pro Glu Asp Met Leu Ala Lys Glu Pro Asp Leu Ile
223          210          215          220
224 Leu Arg Thr Ala His Ala Ile Pro Asp Lys Val Lys Val Met Phe Asp
225          225          230          235          240
226 Lys Glu Phe Ala Glu Asn Asp Ile Trp Lys His Phe Thr Ala Val Lys
227          245          250          255
228 Glu Gly Lys Val Tyr Asp Leu Asp Asn Thr Leu Phe Gly Met Ser Ala
229          260          265          270
230 Lys Leu Asn Tyr Pro Glu Ala Leu Asp Thr Leu Thr Gln Leu Phe Asp
231          275          280          285
232 His Val Gly Asp His Pro
233          290
235 <210> SEQ ID NO: 7
236 <211> LENGTH: 34
237 <212> TYPE: DNA
238 <213> ORGANISM: Artificial Sequence
240 <220> FEATURE:
241 <223> OTHER INFORMATION: Oligonucleotide primer
243 <400> SEQUENCE: 7
244 gagaaaatac atatgtcacg tattggtaat aaag
247 <210> SEQ ID NO: 8
248 <211> LENGTH: 29
249 <212> TYPE: DNA
250 <213> ORGANISM: Artificial Sequence
252 <220> FEATURE:
253 <223> OTHER INFORMATION: Oligonucleotide primer
255 <400> SEQUENCE: 8
256 ccctcgagtt atttacctgt ttaccttc
259 <210> SEQ ID NO: 9
260 <211> LENGTH: 31
261 <212> TYPE: DNA
262 <213> ORGANISM: Artificial Sequence
264 <220> FEATURE:
265 <223> OTHER INFORMATION: Oligonucleotide primer
267 <400> SEQUENCE: 9
268 aaggatccca tgtcacgtat tggtaataaa g
271 <210> SEQ ID NO: 10
272 <211> LENGTH: 38
273 <212> TYPE: DNA
274 <213> ORGANISM: Artificial Sequence
276 <220> FEATURE:
277 <223> OTHER INFORMATION: Oligonucleotide primer
279 <400> SEQUENCE: 10
280 actagtcgac ttatttacct gttttacctt cttaag

```

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/568,737A

DATE: 02/01/2007

TIME: 08:37:21

Input Set : F:\436uspc.app.txt

Output Set: N:\CRF4\02012007\J568737A.raw

L:16 M:271 C: Current Filing Date differs, Replaced Current Filing Date